BIBLIOMETRIC STUDY OF INDIAN JOURNAL OF INTERNATIONAL LAW: A Quantitative and Qualitative analysis of various aspects of IJIL articles (1962-2010)

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ABSTRACT

This article describes and analyses the various bibliometric components of articles published in Indian Journal of International Law (IJIL). The paper analyses the various quality aspects of 326 articles which were published during the period under study from 1960 to 2010. The paper covers the quantitative growth of articles by volume and year, distribution of citations by volume and year, range and percentage of citations per article, authorship pattern of articles, authorship productivity, ranked list of most prolific contributors, ranked list of authors by geographical affiliation, ranked list of authors by profession, ranked list by subjects of articles and journal self-citation in the articles. How often an article, an author, or a journal is cited by others is an indication of the quality of the journal and performance of the researcher or group—the higher the number of citations, the higher the level of quality and performance.

Keywords: IJIL; Bibliometric, Citation Analysis.

Introduction

Bibliometrics is a set of mathematical and statistical methods used to analyze and measure the quantity and quality of books, articles, and other forms of publications. There are three types of Bibliometrics indicators: *quantity indicators*, which measure the productivity of a particular researcher, or group; *quality indicators*, which measure the quality (or "performance") of a researcher, or group's output; and *structural indicators*, which measure connections between publications, authors, and areas of research.

This research article examines the characteristics and trends of Indian Journal of International Law (IJIL) articles from the early years of its publications till the present. IJIL contains well informed articles on international law and related areas, shorter articles, editorial comments, notes and comments, book reviews, official documents, judicial decision involving questions of international law, select bibliographies on international law and related areas, notices about new publication judgments and orders of international court of justice, announcements, research notes, current developments and other information relevant to the legal profession.

A total of 326 articles were picked by a stratified random sampling process from five different editorial periods. The study reveals that the publication has expanded over the years in terms of quality and contents. 335 authors contributed 326 articles over the period of study. Single- author contributions ranked the highest among all categories and academics contributed the most articles. International law and human rights etc was the most written about subject area.

History of Indian Journal of International Law

The Indian Journal of International Law; popularly known as IJIL was founded then in 1960. The journal IJIL was first published by Indian Society of International Law in July 1960. Dr. Radha Binod Pal was the first editor in chief. The IJIL is a quarterly journal since its inception, with its first volume being published in July 1960. It contained memorandum of association of the Indian Society of International Law, message from the honorary Editor in Chief- Dr. Radha Binod Pal, Inaugural Session of the ISIL message to the conference, Welcome address from Sh. G.S. Pathak -Executive President. Inaugural address of the then hon'ble Prime Minister of India Sh. Jawahar Lal Nehru, Patron, Vote of thanks from Sh. S.R. Das- former Chief Justice of India and first Honorary President, Various articles on International Law which were contributed by the eminent authors like Dr. Nagendra Singh, Dr. C.V.L. Narayan, Dr. J. S. Bains, Dr. R. K. Dixit, Sh. M. S. Rajan, Sh. R. P. Anand, Sh. K. Narayan Rao, Sh. M. K. Nawaz, Sh. G. S. Pathak, Sh. V. K. Krishna Menon-President, the Hon'ble Defence Minister of India.

In 1970 IJIL was well established and become the leading international law journal from India. In 1990 the publication halted for a short period of time due to some unavoidable internal circumstances but in 1995 resumed its publication. The gap has been filled and publication's periodicity restored. The gap was filled by publishing one issue for the entire year in vol. 30, 1990 to vol. 35, 1995. Publication resumed in 1996 with its 36th volume published in June after six year of suppression. The journal continued to perform a valuable service to the judiciary, the profession and the public. IJIL has had a long history of publication and is thus suitable for an in-depth study.

Review of Literatures

There have been many studies conducted on bibliometric study of single foreign journals. Some of the relevant studies in the aforesaid direction are discussed here. **Hussain et al. (2011)** in their study "Bibliometric analysis of the Electronic Library Journal (2000-2010)" analyzed a bibliometric study of 578 articles that were published during the period January 1, 2000 to December 31, 2010 in the Electronic Library Journal. Majority of articles (269) were contributed by single authors and most of the authors (72.15 percent) belonged to universities. **Singh et al. (2011)** in their study "Citation analysis of Journal of Documentation" analyzed the articles published in the Journal of Documentation from 1996-2010. A total of 487 articles were published in the journal during the study and highest number (44) of articles was published in the year 2005. The journal contained 15,587 citations during the study and the maximum cited were reported in year 2009. In the authorship pattern, single authors 201 (49 percent) citations were more dominant than others and included both academics and non-academics. This study also reveals that Journal of Documentation is the most preferred journal used by authors in their citations. Har Singh (2013) in his study 'Citation analysis of Collection Building during 2005-2012' revealed that 179 articles were consulted from eight volumes (2005-2012) which carried 2,388 citations including 85 self-citations. The majority of articles (30.17 per cent) recorded between 10-19 ranges of citations per article followed by (28.50 per cent) 1-9 range. The majority of articles were contributed by single authors (65.92 per cent) and majority of contributors were from the USA (69.96 per cent) followed by Canada (3.95 per cent) and India (3.95 per cent) respectively. Journal articles (42.71 per cent) were the most cited source materials, followed by online and electronic sources (25.80 per cent), books including edited books (20.44 per cent), newspapers (5.23 per cent) and so on. Out of 179 articles, the majority of articles (33.52 per cent) were Research papers followed by Case study (30.73 per cent), Literature review (12.85 per cent) and so on. The majority of articles (66.48 per cent) were recorded between 6-10 pages, followed by 25.70 per cent articles between 1-5 pages. Out of 1,020 journal articles, Collection Building (9.02 per cent) was the top ranked journal, followed by The Journal of Academic Librarianship (5.0 per cent) and College & Research Libraries (4.22 per cent). Har Singh (2013) in his article 'A bibliometric analysis of the Chinese Librarianship: an International Electronic Journal, 2009-2012' studied 55 articles published in the period under study. The highest number of articles were published in the year 2012 (17, 30.9%), followed 2011 (14, 25.45%) and 2010 (13, 23.64%). The minimum numbers of articles were published in the year 2009 with 11 articles (20%). The 55 articles contained a total of 903 citations and self-citations. The year 2012 had the most citations (276, 30.56%), followed by the year 2011 (237, 26.25%). The year 2009 had the fewest citations (178, 19.71%). The largest number of articles had been published by single authors (23, 41.82%) followed by two authors (20, 36.36%), three authors (9, 16.36%), and more than three authors (3, 5.45%). It is found that the degree of author collaboration in the *Chinese Librarianship* ranged from 0.47 to 0.71 during the period under study. Out of 106 authors, 39 (36.80%) are from India, followed by Nigeria (33, 31.13%), Pakistan (16, 15.09%), and USA (11, 10.38%). China and United Arab Emirates have contributed 2 authors each. And Botswana, Canada, and Iran have contributed one author each.

The review of literatures reveled that most of bibliometric analysis were done of foreign journals. Therefore, a bibliometric study of an Indian journal has been done since 1962-2010 under the study.

Objectives of the Study

The main objective of this study is to identify the characteristics of IJIL articles and determine if there were changes over time. The following areas were examined:

- The quantitative growth of articles by volume and year
- Distribution of citations by volume and year

- Range and percentage of citations per article
- Authorship pattern of articles
- Authorship productivity
- Ranked list of most prolific contributors
- Ranked list of authors by geographical affiliation
- Ranked list of authors by profession
- Ranked list by subjects of articles and
- Journal self-citation in the articles

Research Methodology and Data Collection

In order to examine the characteristics and trends of articles published in IJIL a total of 326 articles from the following years were collected for analysis:

- 1962-1965 During which C.J. Chacko was the Editor in Chief
- 1969-1970 During which K. Krishna Rao was the Editor in Chief
- 1972-1973 During which V.K. Krishna Menon was the Editor in Chief
- 1975-1978 During which Nagendra Singh was the Editor in Chief
- 1985-1988 During which Nagendra Singh was the Editor in Chief
- 1996-1999 During which Rahmatullah Khan was the Editor in Chief
- 2006-2010 During which Rahmatullah Khan was the Editor in Chief

The study focuses only on the articles published in IJIL during the period chosen. Gaps between different periods were considered. Book reviews, cases and other information in IJIL were not taken into consideration. For each article author's name, number of articles, number of references, author's geographical affiliation and profession, subject of article and journal self citation were noted. The data were complied recorded tabulated and analyzed using a statistical analysis software package called SPSS (Statistical Package for Social Sciences). The software was used to generate data of frequency distribution, range and mean, and ranked list of subject distribution, the quantitative growth of articles by year, distribution of citations by volume, range and percentage/mean number of citations per article, journal self citation in the article, authorship pattern of articles, authorship productivity, ranked list of most prolific contributor, ranked list of authors by profession and ranked list by subjects of articles. It is to be noted that this study could have some limitations although it has highlighted some beneficial points.

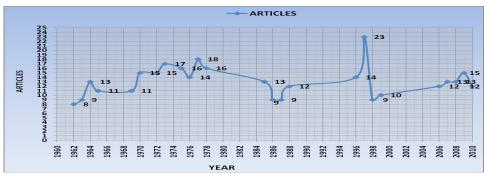
Findings of the Study

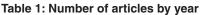
Quantitative growth of articles by volume and year

<u>Table 1</u> shows the total number of articles published from the year under study totaling 326. The number of articles published varied each year. The distribution of articles by year shows that 1997 contained the highest number, with a total of 23 articles (7.06%) followed by 1977 with 18 articles (5.52%). The table also reveals that

the distribution of articles is not consistent each year. The range of articles published per year during the period under study is between 23 and 8.

2010	50	3	3	3	3	12	3.68
Total						326	100







Distribution of citations by article and year wise

Table 2 presents the distribution of citations per volume per issue. The 326 articles contained a total of 22920 citations. The distribution of citations in the table shows that the maximum number of citations totaling 1182 was in 1962 and the lowest was in 1998 with 426 citations. The number of citations per year ranges from 426 to 1182 with a mean of----. 1962 marked the highest number of citations per article (147.74) and 1977 marked as the lowest number of citations per article (33.6). The average citation per article varied from 33.6 to 147.74 with an average of 70.1.

Year		al Nui E WIS		of A	rticles		Total Number of Citations ISSUE WISE Total				
	1	2	3	4		1	2	3	4	rotar	
1962	3	2	2	1	8	450	206	213	313	1182	147.8
1963	2	2	2	3	9	167	200	185	199	751	83.4
1964	3	4	3	3	13	427	629	229	67	1352	104.0
1965	3	3	2	3	11	162	278	309	225	974	88.5
1969	3	3	2	3	11	177	232	274	173	856	77.8
1970	4	5	3	3	14	80	139	215	245	709	50.6
1972	4	4	3	4	15	274	149	216	204	843	56.2
1973	4	4	5	4	17	306	290	182	128	906	53.3

1987	3	3		3	9	205	12	-	429	761	84.6
1988	3	3	6		12	236	179	4	81	896	74.7
1996	3	5	2	4	14	166	192	206	217	781	55.8
1997	5	6	9	3	23	276	294	181	147	898	39.0
1998	3	2	4		09	155	137	1	34	426	47.3
1999	2	4	2	2	10	79	307	126	315	827	82.7
2006	3	3	3	3	12	195	423	373	258	1252	104.3
2007	3	5	3	2	13	241	339	216	289	1085	83.5
2008	3	3	4	3	13	166	243	448	400	1257	96.7
2009	5	3	4	3	15	318	346	288	255	1207	80.5
2010	3	3	3	3	12	248	276	400	283	1207	100.6
Total	Tota	l No o	f arti	cles	326	T	otal No of	Citatio	ns	22920	70.1

Table 2: Distribution of citations by article and year wise

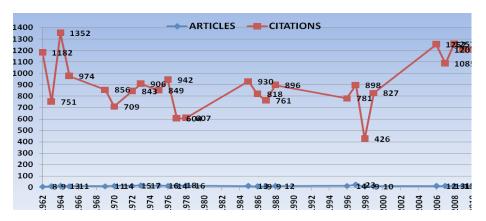


Chart 2: Distribution of Citation by Year and Issue Wise

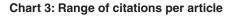
Range and percentage of citations per articles

Table 3 indicates the range and percentage of citations per article. A total of 90 (27.61%) articles top the list with between 91 and above citations. This is followed by 34 (10.43%) articles having between 51-60 citations, 30(9.21%) articles having between 71-80 citations, 29 (8.89%) articles having between 41-50 citations, 27(8.29%) articles having between 61-70 citations, 25(7.67%) articles having between 21-30 citations, 23(7.05%) articles having between 11-20 citations, 22(6.75%) articles having between 31-40 citations, 11(3.37%) articles having between 1-10 citations and 19(5.82%) articles had no citations.

No. of Citation per Article	No. of Articles	Percentage (%)
0	19	5.82
1-10	11	3.37
11-20	23	7.05
21-30	25	7.67
31-40	22	6.75
41-50	29	8.89
51-60	34	10.43
61-70	27	8.29
71-80	30	9.21
81-90	16	4.91
91-and above	90	27.61
Total	326	100

Table 3: Range of Citations per article





Authorship pattern of articles

<u>Table 4</u> reveals the authorship pattern of the journal articles. Single author contributions amount to 318 articles (97.55%) and ranked the highest among all other categories. Joint work produced a total of 7 articles (2.15%). Articles written by three authors mark the lowest with one article only. 1997 marked the highest number of contribution from single authors, with 23 articles. The lowest number of contributions from single author was in 1962 with 8 articles. The highest number of articles from joint authors was in 2008 with two articles. Three authors contribution produced only one article in 2006.

Year	Single Author	Two Author	T h r e e Author	Total Arti- cles	Total Authors
1962	8	0	0	8	8
1963	9	0	0	9	9
1964	13	0	0	13	13
1965	11	0	0	11	11
1969	11	0	0	11	11
1970	14	0	0	14	14
1972	15	0	0	15	15
1973	17	0	0	17	17
1975	16	0	0	16	16
1976	13	1	0	14	15
1977	18	0	0	18	18
1978	16	0	0	16	16
1985	13	0	0	13	13
1986	9	0	0	9	9
1987	9	0	0	9	9
1988	12	0	0	12	12
1996	14	0	0	14	14
1997	23	0	0	23	23
1998	9	0	0	9	9
1999	10	0	0	10	10
2006	10	1	1	12	15
2007	12	1	0	13	14
2008	11	2	0	13	15
2009	14	1	0	15	16
2010	11	1	0	12	13
Total	318	7	1	326	335
Percentage (%)	97.55	2.15	0.3	100	

Table	4:	Autho	rship	Pattern
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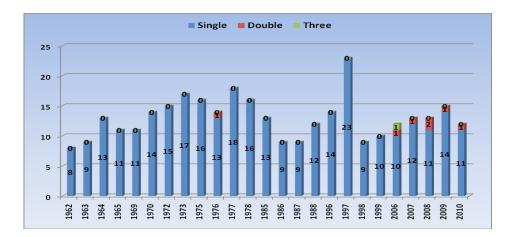


Chart 4: Authorship Pattern

Authorship Productivity

<u>Table-5</u> presents authorship productivity. A total of 335 authors contributed 326 articles over the period under study. Out of 335 authors, 192 authors (80.6%) contributed one article each, 30 authors (12.6%) contributed two articles each, 7 authors (2.9%) contributed three articles each and 2 authors (0.8%) contributed four articles each 5 authors (2.1%) contributed 6 articles each.

No. of Articles	Number of Authors	Percent (%)
1	192 authors	80.6
2	30 authors	12.6
3	7 authors	2.9
4	2 authors	0.8
6	5 authors	2.1
7	1 author	0.5
9	1 author	0.5
Total	238	100



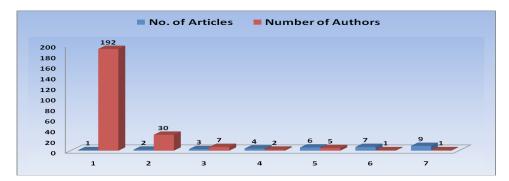


Chart 5: Authorship productivity

Ranked list of most prolific contributors

<u>Table -6</u> shows that the most prolific authors are Rahmatullah Khan who contributed 9 articles, followed by M K Nawaz with 7 articles, B C Nirmal, Nagendra Singh, P S Rao, R P Anand, & V S Mani with six articles each. C J Chacko & Manoj K Sinha is at the fourth rank with 4 articles each. A Jayagovind, C Amerasinghe, Christopher Theodoropoulas, P K Menon, Rudiger Wolfrum, Tullio Treves & Upendra Baxi are at fifth rank with 3 articles each. Ranking at sixth are 30 authors with 2 articles each followed by 192 authors with one article each.

Rank	Name of the author	No. of articles contributed
1 st	Rahmatullah Khan	9
2 nd	M K Nawaz	7
3 rd	B C Nirmal, Nagendra Singh, P S Rao, R P Anand, & V S Mani	6
4 th	C J Chacko & Manoj K Sinha	4
5 th	A Jayagovind, C Amerasinghe, Christopher Theodoropoulas, P K Menon, Rudiger Wolfrum, Tullio Treves, Upendra Baxi	3
6 th	30 Authors	2
7 th	192 Authors	1

Table 6: Ranked list of most prolific contributor

List of authors by geographical locations

<u>Table -7</u> presents the list of authors by geographical affiliation. Out of 335 authors 171 authors (46.57%) were from outside India and 156 authors (51.05%) were from India and geographical location of 8 authors (2.38%) could not be ascertained.

Year	Contribu	tors Country	Not Avail-	Total authors year
	India	Outside India	able	wise
1962	7	1		8
1963	4	5		9
1964	6	7		13
1965	4	7		11
1969	8	3		11
1970	7	5	2	14
1972	8	7		15
1973	8	9		17
1975	10	6		16
1976	8	7		15
1977	11	7		18
1978	7	7	2	16
1985	2	10	1	13
1986	3	5	1	9
1987	5	4		9
1988	4	8		12
1996	6	8		14
1997	11	12		23
1998	4	4	1	9
1999	6	4		10
2006	4	10	1	15
2007	4	10		14
2008	8	7		15
2009	5	11		16
2010	6	7		13
Total	156	171	8	335
Percentage (%)	46.57	51.05	2.38	

Table 7- Ranked list of authors by geographical affiliation

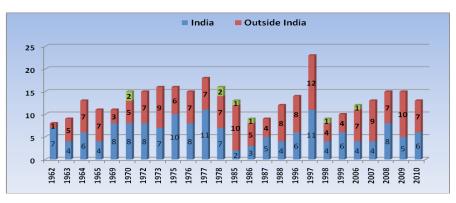


Chart 7: Ranked list of authors by geographical affiliation

Ranked list of authors by profession

<u>Table -8</u> shows the distribution of authors based on their profession. Author's occupational status was divided into four main categories: academician, lawyer, law student and others. Academics include Professors, Associate Professors, Assistant Professors, Readers, and Lectures and those classified under others category includes Judicial officers, Justice, Legal officers, Directors, Deans, Editors, Secretary, Adviser and etc. It reveals that 173 academics (51.64%) working in higher learning institutions contributed most articles. The authors from others categories contribution were (30.75%), followed by law students with 28 (8.36%) contributions. The professional status of 17 authors (5.07%) could not be ascertained. A total of 14 lawyers (4.18%) were the lowest contributors.

YEAR	YEAR PROFESSION							
	Academicians	Lawyers	Students	Others	Not Avail- able	Authors		
1962	3	3	-	2	-	8		
1963	4	1		4	-	9		
1964	8	-	1	4	-	13		
1965	8	-	-	2	1	11		
1969	7	-	2	1	1	11		
1970	6	-	1	4	3	14		
1972	11	1	1	2	-	15		
1973	10	2	1	3	1	17		
1975	10	1	1	4	-	16		
1976	11	1	1	2	-	15		
1977	5	-	-	12	1	18		

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1978	7	-	2	6	1	16
1985	6	-	-	5	2	13
1986	4	-	1	3	1	9
1987	8	-	-	-	1	9
1988	8	-	-	3	1	12
1996	5	-	-	7	2	14
1997	8	-	-	14	1	23
1998	1	-	2	6	-	9
1999	4	-	2	4	-	10
2006	6	1	1	7	-	15
2007	8	-	1	4	1	14
2008	8	4	3	-	-	15
2009	9	-	3	4	-	16
2010	8	-	5	-	-	13
то-	173	14	28	103	17	335
TAL						
(%)	51.64%	4.18%	8.36%	30.75%	5.07%	100%
RANK	1 st	5 th	3 rd	2 nd	4 th	

Table 8: List of authors by profession



Chart 8: List of authors by profession

Ranked list of subject of articles:

<u>Table-9</u> shows the ranked list by subjects. Out of the 20 subjects involved the top 10 subjects are listed in the table below and the remaining were categorized under others. Out of the 326 articles analyzed, 85 articles (26.07%) belonged to the subject International Law. The second category was International Human Rights with 61 articles (18.72%) followed by Law of the Sea with 52 article (15.95%), International

Trade Law with 27 articles (8.28%), United Nations 25 articles (7.67%) followed by Air and Space Law and International Environmental Law with 15 articles (4.60%) each and next Nuclear weapons with 9 articles (2.76%). 37 article (11.35%) does not fall in given category of subjects.

Rank	Subject	Frequency	Percentage (%)
1	International Law	85	26.07
2	International Human Rights	61	18.72
3	Law of the Sea	52	15.95
4	International Trade Law	27	8.28
5	United nations	25	7.67
6	Air and Space Law	15	4.60
7	International Environ- mental Law	15	4.60
8	Nuclear Weapons	9	2.76
9	Others	37	11.35
Total		326	100%

Table 9: Ranked list of subject of articles

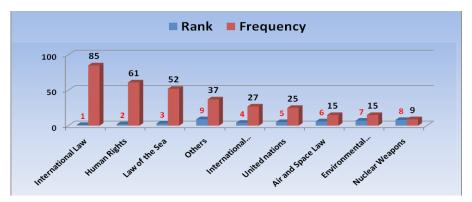


Chart 9: Ranked list of subject of articles

Journal Self – Citations

<u>Table- 10A</u> shows the extent of journal self-citation during the period under study. It shows that out of 326 articles, 53 articles contained journal self citations and 273 articles had no journal self citation the average self- citation per year is 4.04.

<u>Table- 10 B</u> shows that from a total of 22920 citations 101 (0.45%) citations are journal self citations and 22819 (99.45%) citation are from other journals. How often an article, an author, or a journal is cited by others is an indication of quality—the higher the number of citations, the higher the level of quality. Here the average citation per year is 916.8.

Journal Self-citation	Frequency	Percent%
Yes	53	16.26
No	273	83.74
Total	326	100

Year	Total no of Citations volume wise	No. of Self Citations per volume	Citations of other journals
1962	1182	0	1182
1963	751	5	746
1964	1352	1	1351
1965	974	28	946
1969	856	4	852
1970	709	2	707
1972	843	1	842
1973	906	0	906
1975	849	0	849
1976	942	1	941
1977	604	1	603
1978	607	2	605
1985	930	15	915
1986	818	4	814
1987	761	7	754
1988	896	5	891
1996	781	0	781
1997	898	6	892
1998	426	6	420
1999	827	8	819
2006	1252	1	1251
2007	1085		1085

Table 10A: Journal self-citations

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2008	1257	1	1256
2009	1207	3	1204
2010	1207	0	1207
Total	22920	101	22819
Percent	100%	0.45%	99.55%

Table 10B: Journal self -citations

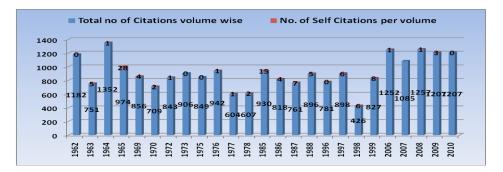


Chart 10B- Journal self-citations

Conclusion

The *Indian Journal of International Law* has indeed established itself as the oldest and leading international law journal in the country. The following conclusions were reached from this research. The year 1997 contained the highest number of articles. Maximum number of citations was in 1962. The study also reveals that a total of 90 articles top the list with 91 and above citations. The highest number of articles was contributed by single authors and most of the authors were academicians. There is no fixed rule as to the number of articles IJIL will publish in a year. The articles published on many different aspects of international law and it can be concluded that the publication is open in its selection of topics. The results shown in this article provide the IJIL editors with a better understanding of the characteristic and trends of the articles published in the journal. The publishing trend of IJIL totally depends upon the quality of research.

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